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动物分类学报

TWO NEW SPECIES AND TWO NEWLY RECORDED SPECIES OF THE GENUS *PROMALACTIS* MEYRICK (LEPIDOPTERA, OECOPHORIDAE) FROM CHINA

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Abstract Four species of the genus *Promalactis* Meyrick are treated in this paper. *Promalactis palmata* sp. nov. and *P. subcolacephala* sp. nov. are described as new; *P. sinevi* Lvovsky, 1986 and *P. svetlanae* Lvovsky, 1985 are newly recorded to China. Images of adults and illustrations of genitalia are provided.

Key words Lepidoptera, Oecophoridae, *Promalactis*, new species, new record, China.

The genus *Promalactis* Meyrick contains 162 valid species worldwide to date, mostly described from the Palaearctic and Oriental regions. The genus is very diverse and widely distributed in China, with 87 species recognized. The aim of the present paper is to describe two new species based on the specimens collected from Guizhou Province, and newly report two species for China based on the specimens collected from Beijing, Hebei, Heilongjiang, Liaoning and Shanxi Provinces. All the studied specimens, including the types, are deposited in the Insect Collection, College of Life Sciences, Nankai University, Tianjin, China.

***Promalactis palmata* sp. nov.** (Figs 1, 5, 9)

Description. Adult (Fig. 1). Wingspan 9.0 – 11.5 mm. Head shining leaden. Labial palpus black, second segment grayish black on inner surface, third segment white at apex. Antenna black on ventral surface; scape white on dorsal surface, pectens brown; flagellum black ringed with grayish white on dorsal surface. Thorax and tegula dark brown mixed with yellowish brown. Forewing ground colour deep ocherous yellow, darkened to ferrugineous brown in posterior area, costal margin grayish black on basal 2/5; markings white edged with black scales: a large spot mixed with some deep ocherous yellow and black scales situated beyond middle of costal margin, its inner side with a short black stripe, outer side with a large rectangular black patch obliquely outward; a short stripe near middle of cell on upper margin obliquely outward; a curved stripe before end of cell obliquely outward, sometimes connected with costal spot; five short stripes extending from base of fold to above tornus, in some individuals second and third as well as fourth and fifth stripes connected respectively, third and fifth stripes longer and curved, obliquely outward; four evenly spaced short stripes arising from dorsum obliquely outward to below fold, second one curved; apex with a larger oval spot, a smaller one below it on termen; tornus with dense black scales, forming an indistinct patch; cilia yellow except white on dorsum, mixed with black at base. Hindwing and cilia gray. Fore leg black, tibia and tarsus with white specks on outside, tibia with a tuft of short white scales at apex; mid leg black on outside, yellowish white on inside, tibia with a white spot at base, a tuft of short white scales at middle and a tuft of long white scales at apex, tarsus with white annulations on outside; hind leg yellow on ventral surface, tibia yellowish gray on dorsal surface, tarsus black annulated with white on dorsal surface.

Male genitalia (Fig. 5). Uncus broad at base, gradually narrowed to 3/5; distal 2/5 compressed laterally, roundly embowed on dorsal surface; apex rounded, with a small point ventrally. Gnathos tongue-shaped, about 4/5 length of uncus. Valva broad at base, gradually narrowed to about 2/3; distal 1/3 nearly palm-shaped, rounded apically, with dense setae. Costa slightly concave medially; a heavily sclerotized leaflike process arising from base, with a short apical spine and sparse long setae distally, dentate marginally. Sacculus broad at base, narrowed gradually to near 3/5; distal 2/5 narrow, slightly projected at distal 1/4. Juxta strong, rounded anteriorly; lateral lobes thick basally, tapering distally, reaching 2/3 of tegumen apically. Saccus almost as long as uncus, broad at base, gradually narrowed to 3/5, distal 2/5 slender, apex rounded. Aedeagus long and thin, straight, about 1.3 times length of valva; two spinous cornuti present, one placed medially, one distally.

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Female genitalia (Fig. 9). Apophysis anterioris about 1/2 length of apophysis posterioris. 8th sternite somewhat heart-shaped, sclerotized, concave at middle on posterior margin, densely spinous. Antrum narrow anteriorly, widened posteriorly, widely concave in shallow V shape at middle on posterior margin. Ductus bursae with basal half thin and straight, bearing four small naillike spines near middle; distal half expanded and curved, with a sclerotized longitudinal band. Corpus bursae rounded; two oval signa present, with small teeth on one side.

Holotype ♂, China, Kuankuoshui Nature Reserves (28° 14′ N, 107° 12′ E; alt. 1 500 m), Suiyang County, Guizhou Province, 12 Aug. 2010, coll. YANG Lin-Lin, genitalia slide No. DZH10243. Paratypes: 2 ♂♂, 3 ♀♀, 10 – 13 Aug. 2010, other data as holotype; 1 ♂, 1 ♀, 16 Aug. 2010, coll. DU Xi-Cui, other data as holotype.

Diagnosis. This species is similar to *P. epistacta* Meyrick, 1908, but can be separated from it by the leaflike basal process of costa, distal 1/3 of valva nearly palm-shaped, lateral lobes of juxta reaching 2/3 of tegumen and the aedeagus with two cornuti in the male genitalia. In *P. epistacta*, the basal process of costa is osierlike, distal 1/4 of the valva is hooked, lateral lobes of juxta are indistinct and the aedeagus has one cornutus in the male genitalia.

Etymology. The specific name is derived from the Latin *palmatus* (= palm-shaped), referring to the palm-shaped distal 1/3 of valva.


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Figs 1 – 4. Adults of *Promalactis* spp. 1. *P. palmata* sp. nov., paratype, ♀. 2. *P. subcolacephala* sp. nov., paratype, ♂. 3. *P. sinevi* Lvovsky, ♀. 4. *P. svetlanae* Lvovsky, ♀.

***Promalactis subcolacephala* sp. nov.** (Figs 2, 6)

Description. Adult (Fig. 2). Wingspan 11 mm. Head with vertex white, frons yellowish brown. Labial palpus with second segment yellowish gray on inner surface, black on outer surface; third segment black. Antennal scape white, pectens dark brown; flagellum with basal several segments white, remaining flagella white ringed with black on dorsal surface, dark brown on ventral surface. Thorax and tegula dark ocherous brown mixed with dark brown scales. Forewing ground colour ocherous yellow, markings white edged with black: basal fascia from near base of costal margin obliquely outward to dorsum; second fascia from costal 1/4 to dorsal 2/5, broader anteriorly, slightly arched outward; costal margin with a large quadrilateral patch at 3/5; an arched spot placed below costal spot, its two ends reaching dorsal 3/4 and near tornus respectively; apex with a large ovate spot, below it with a dot; cilia ocherous yellow, gray along dorsum. Hindwing and cilia gray. Fore leg

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Figs 5 – 8. Male genitalia of *Promalactis* spp. 5. *P. palmata* sp. nov. (slide No. DZH10250). 5a. Enlarged uncus (slide No. DZH10247). 6. *P. subcolacephala* sp. nov. (slide No. DZH10335). 7. *P. sinevi* Lvovsky (slide No. DZH10208). 8. *P. svetlanae* Lvovsky (slide No. DZH10071).

black, tibia with a white speck at middle and a tuft of short white scales at apex, tarsus with white annulations on outside; mid leg with femur yellowish, tibia with basal 1/4 black, distal 3/4 white mixed with black on outside, yellowish on inside, with a tuft of long white scales at apex, tarsus black ringed with white; hind leg yellow on ventral surface, grayish yellow on dorsal surface, tarsus black with white specks.

Male genitalia (Fig. 6). Uncus nearly bell-shaped, broad at base, gradually narrowed to 2/3, distal 1/3 slender, apex rounded. Gnathos short tongue-shaped, with a tiny apical process; lateral arms wide, longer than ventral plate. Valva narrowed at base, gradually broadened to apex; apex concave posteriorly, forming a large hooked dorsal process, its basal half wide and straight, distal half thinner and almost vertically curved ventrad. Sacculus narrow, setose distally; apex roundly protruded, slightly exceeding apex of valva. Juxta heavily sclerotized, gradually narrowed to rounded anterior margin; lateral lobes broad, curled inward and forming a cylinder, with a strong spineform process at base laterally. Saccus very long, broad at base, gradually narrowed to 1/4, distal 3/4 slender, rounded apically. Aedeagus thin, almost straight, broadened at base, narrowly pointed apically, about 1.6 times length of valva; cornutus thick, spinelike, placed distally.

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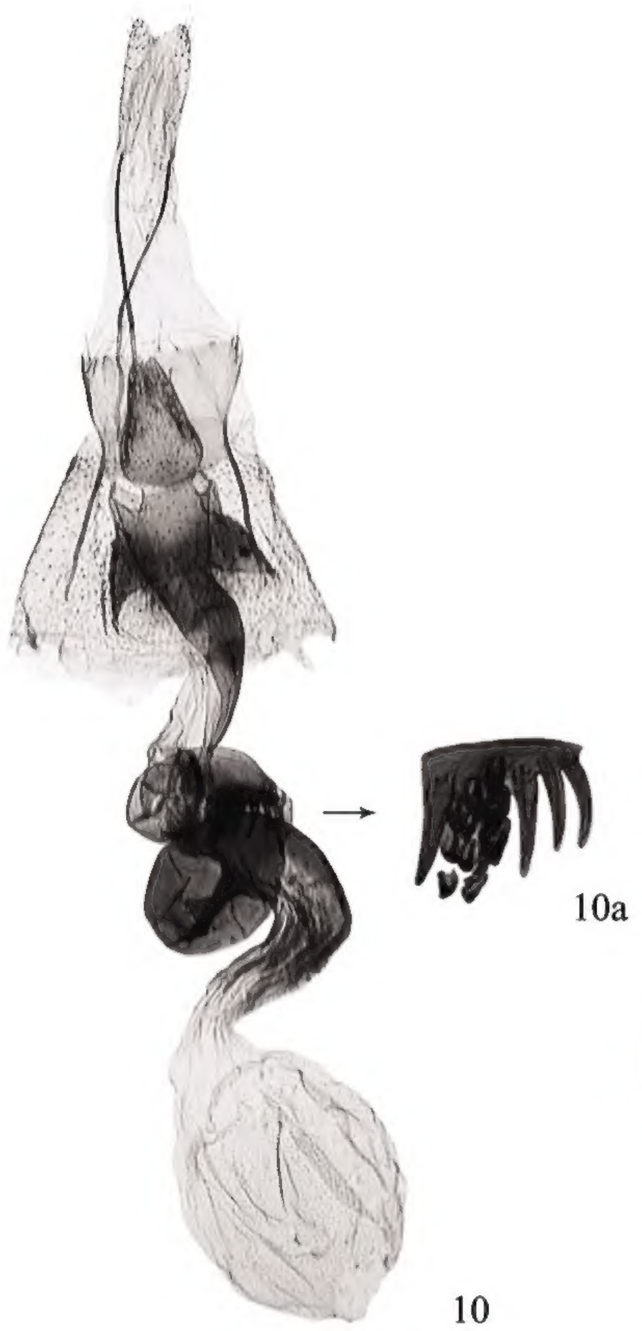

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Figs 9 – 11. Female genitalia of *Promalactis* spp. 9. *P. palmata* sp. nov. (slide No. DZH10244). 10. *P. sinevi* Lvovsky (slide No. DZH10207). 10a. Enlarged spines in ductus bursae (slide No. DZH10062). 11. *P. svetlanae* Lvovsky (slide No. DZH10072).

Female. Unknown.

Holotype ♂, China, Kuankuoshui Nature Reserves (28°14′N, 107°12′E; alt. 840 m), Suiyang County, Guizhou Province, 9 June 2010, coll. YANG Lin-Lin, genitalia slide No. DZH10335. Paratype 1 ♂, 8 June 2010, other same data as holotype.

Diagnosis. This species is very close to *P. colacephala* Wang, Li *et* Zheng, 2000, but can be separated from the later by the valva with a large hooked dorsoapical process and the aedeagus without curved spinelike distal process in the male genitalia. In *P. colacephala*, the valva has a straight dorsoapical process and the aedeagus has a curved spinelike distal process in the male genitalia.

Etymology. This specific name is derived from the Latin prefix *sub-* (= near) and the specific name of another species *colacephala*, referring to the similarity of the two species.

***Promalactis sinevi* Lvovsky, 1986 New record to China** (Figs 3, 7, 10)

Promalactis sinevi Lvovsky, 1986: 39.

Material examined. 1 ♀, Xiaolongmen Forest Farm (39°58′N, 115°26′E; alt. 1 080 m), Beijing, 18 July 2010, coll. ZHANG Ai-Huan and YANG Kai; 1 ♀, Mt. Wuling (40°36′N, 117°29′E; alt. 800 m), Hebei Province, 28 July 2009, coll. ZHANG Ai-Huan and TIAN Xue-Ling, 1 ♀, 27 July 2009, coll. TIAN Xue-Ling ang YAN Long, 1 ♀, 19 July 2010, coll. ZHANG Ai-Huan and SHI Xiao-Yu; 27 ♂♂, 56 ♀♀, Mt. Qian (41°05′N, 123°07′E), Anshan City, Liaoning Province, 2 – 15 July 2010, coll. LIU Jia-Yu and CAI Yan-Peng; 1 ♂, Xizhashui Village (35°41′N, 113°26′E; alt. 900 m), Lingchuan County, Shanxi Province, 16 July 2010, coll. BAI Hai-Yan and YANG Lin-Lin.

Diagnosis. This species is similar to *P. parki* Lvovsky, 1986, but can be separated from it by both uncus and gnathos concave at apex medially, the sacculus with distal process bearing a dorsoapical hair brush, the aedeagus with an apical spine, and the cornutus about 1/8 length of the aedeagus in the male genitalia (Fig. 7); the lamella postvaginalis with several long setae in the female genitalia (Fig. 10). In *P. parki*, the uncus has an apical process at middle, the gnathos is pointed at apex, the distal process of the sacculus doesn't have a hair brush, the aedeagus lacks the apical spine, and the cornutus is about 1/2 length of the aedeagus in the male genitalia; the lamella postvaginalis has a tuft of dense setae in the female genitalia.

Distribution. China (Beijing, Hebei, Liaoning, Shanxi); Russia (Far East).

***Promalactis svetlanae* Lvovsky, 1985 New record to China** (Figs 4, 8, 11)

Promalactis svetlanae Lvovsky, 1985: 101; Park *et* Park, 1998: 57.

Diagnosis. This species is close to *P. scleroidea* Wang, 2006, but can be separated from it by the narrow uncus pointed apically, the sacculus symmetrical and the cornutus about 2/5 length of the aedeagus in the male genitalia (Fig. 8); the lamella postvaginalis crown-shaped, the ductus bursae with two short spines posteriorly and the corpus bursae with two signa in the female genitalia (Fig. 11). In *P. scleroidea*, the broad uncus is concave apically, the sacculus is asymmetrical, and the cornutus is less than 1/10 length of the aedeagus in the male genitalia; the lamella postvaginalis is columniform, the ductus bursae lacks spines posteriorly and the signum is absent in the female genitalia.

Material examined. 1 ♂, 1 ♀, Mt. Maoer Forest Park (45° 17′ N, 127° 31′ E), Shangzhi City, Heilongjiang Province, 13 – 14 June 2010, coll. LIU Jia-Yu and CAI Yan-Peng.

Distribution. China (Heilongjiang); Russia (Far East).

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锦织蛾属二新种和中国二新纪录种（鳞翅目，织蛾科）*

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摘 要 记述锦织蛾属 *Promalactis* Meyrick 4 个种，包括新种掌锦织蛾 *P. palmata* sp. nov. 和仿丽头锦织蛾 *P. subcolacephala* sp. nov.，中国新纪录种西锦织蛾 *P. sinevi* Lvovsky, 1986 和斯锦织蛾 *P. svetlanae* Lvovsky, 1985。文中提供了每个种的成虫和外生殖器特征图。

掌锦织蛾，新种 *Promalactis palmata* sp. nov.（图 1, 5, 9）

本种外形和外生殖器特征与显锦织蛾 *P. epistacta* Meyrick, 1908 近似，但本种雄性外生殖器抱器背基部突起呈叶状，抱器瓣端部 1/3 近似掌状，阳茎基环侧叶末端达背兜 2/3 处，阳茎具 2 枚角状器。显锦织蛾 *P. epistacta* 雄性外生殖器抱器背基部突起柳条状，抱器瓣端部钩状，阳茎基环侧叶不明显，阳茎具 1 枚角状器。

正模 ♂，贵州省绥阳县宽阔水保护区，海拔 1 500 m，2010-08-12，杨琳琳采，外生殖器玻片号 DZH10243。副模：2 ♂♂，3 ♀♀，2010-08-10 ~ 13，其它资料同正模，1 ♂，1 ♀，2010-08-16，杜喜翠采，采集地点同正模（外生殖器玻片号 DZH10244 ♀，DZH10245 ♀，DZH10247 ♂，DZH10249 ♀，DZH10250 ♂）。

分布：中国（贵州）。

仿丽头锦织蛾，新种 *Promalactis subcolacephala* sp. nov.（图 2, 6）

本种与丽头锦织蛾 *P. colacephala* Wang, Li *et* Zheng, 2000 非常近似，但雄性外生殖器抱器瓣末端背面有 1 钩状突起，阳茎末端无刺状突起。丽头锦织蛾 *P. colacephala* 雄性外生殖器抱器瓣末端背面有 1 直的突起，阳茎末端有 1 弯曲的刺状突起。

正模 ♂，贵州省绥阳县宽阔水保护区，海拔 840 m，2010-06-09，杨琳琳采，外生殖器玻片号 DZH10335。副模 1 ♂，2010-06-08，其它资料同正模（外生殖器玻片号 DZH10253）。

分布：中国（贵州）。

西锦织蛾 *Promalactis sinevi* Lvovsky, 1986 中国新纪录（图 3, 7, 10）

Promalactis sinevi Lvovsky, 1986: 39.

分布：中国（北京、河北、山西、辽宁）；俄罗斯（远东）。

斯锦织蛾 *Promalactis svetlanae* Lvovsky, 1985 中国新纪录（图 4, 8, 11）

Promalactis svetlanae Lvovsky, 1985: 101; Park *et* Park, 1998: 57.

分布：中国（黑龙江）；俄罗斯（远东）。

关键词 鳞翅目，织蛾科，锦织蛾属，新种，新纪录，中国.

中图分类号 Q969.42

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